



POLICY LEARNING IN INFORMATION TECHNOLOGIES
FOR PUBLIC TRANSPORT ENHANCEMENT

GOOD PRACTICES – PUBLIC TRANSPORT AND/OR MULTIMODAL INFORMATION SYSTEMS

INFORMATION ABOUT THIS GOOD PRACTICE IS PROVIDED BY INSTITUTE OF LOGISTICS AND WAREHOUSING (ILIM, PP5)

REAL TIME PASSENGER INFORMATION SYSTEM

General information

Description

Bern is the city where more than one operators are in a service of passengers. Bernmobil is city operator, conducting the transport mainly by trams, but some lines, like connection with airport, use buses. Postbus Bern is operator, covering its lines bigger part of Switzerland, where Bern is one of the transfer centres. Postbus offers the service for commuters living in suburban areas or passenger travelling on longer distances. RBS is the local and city trains and operator, managing, among the others, the lines of Bern S-bahn. MOOLINER is the option for night transport in Bern and towns around. Consolidation of information from 4 different operators was aim of the Glue Software Engineering AG, which have taken on the task of joint information system for local commuters preparation. This way MEZI (Mobile real-time information system) was created and four different companies, supplying transport services to commuters, have been connected with one real time passenger information system. The MEZI supplies the timetable for the mobile phones information in real-time (RT) on the lines of BERNMOBIL, Postbus Bern, RBS and MOONLINER. Some applications apart from timetable offers geopositioning and directions to the nearest city transport stop or station. The newest version of MEZI offers even some augmented reality solutions.

The solution was developed and implemented together with the Bernese software engineering company Glue Software Engineering AG. Originally the application was available for both Java-enabled mobile phones as well as iPhones. Mobile is the time table for the entire route network of BERNMOBIL, for most PostBus routes in Greater Bern and the bus routes available from RBS (Since 2012 also the Regional Trains of RBS are covered).

Background and Context

The objectives to be achieved by real-time information service:

- customer information with place, time and actual situation along the travel chain;
- automated processing and coverage with stable quality;
- simply integrated into the existing infrastructure;
- marketing tool - new forms of dialogue;
- increases customer satisfaction.

Policy design details

Policy Design Steps and Timing

August 2009: First discussions with customers,

September 2009: Demo prototype,

October 2009: Design and Development,

November 2009: Testing,

December 2009: Semi-public launch with the annual Swiss timetable change.

Actors Involved

1. Glue Software Engineering AG, Bern – software company, developer of the application, system integrator
2. Bernmobil – city transport operator, supplier of the data, beneficiary
3. Moonliner – night transport operator, supplier of the data, beneficiary
4. PostAuto Schweiz – national bus operator, supplier of the data, beneficiary
5. RBS – local and regional train operator, supplier of the data, beneficiary

Decision Making Process

MEZI for the region of Berne was developed for a group of Bernese Public Transport Organisations: BERNMOBIL, PostAuto Berne, RBS and Moonliner. In order to accelerate the decision process prepared a prototype to show the benefits of an app based mobile solution were prepared.

Implementation details

Implementation Steps and Timing

December 2009 – initial implementation of MEZI. From the change of timetable from 13th December 2009 BERNMOBIL, Postbus and RBS launch for bus and tram in Greater Bern one new service for the passengers: The Mobile Timetable with real-time information.

September 2011 – updated version of MEZI with augmented reality and Moonliner timetable. MEZI update 2.2.0 is available for iPhone and iPad now available on the App Store. Besides optimizations and adjustments in data production are the newly Moonliner departures for the Bern region on board. Alternatively, to list and Google Maps can be near the new stations with the associated departures show the live camera image. These 'augmented reality' mentioned functionality also shows at a glance the direction and distance to the desired station.

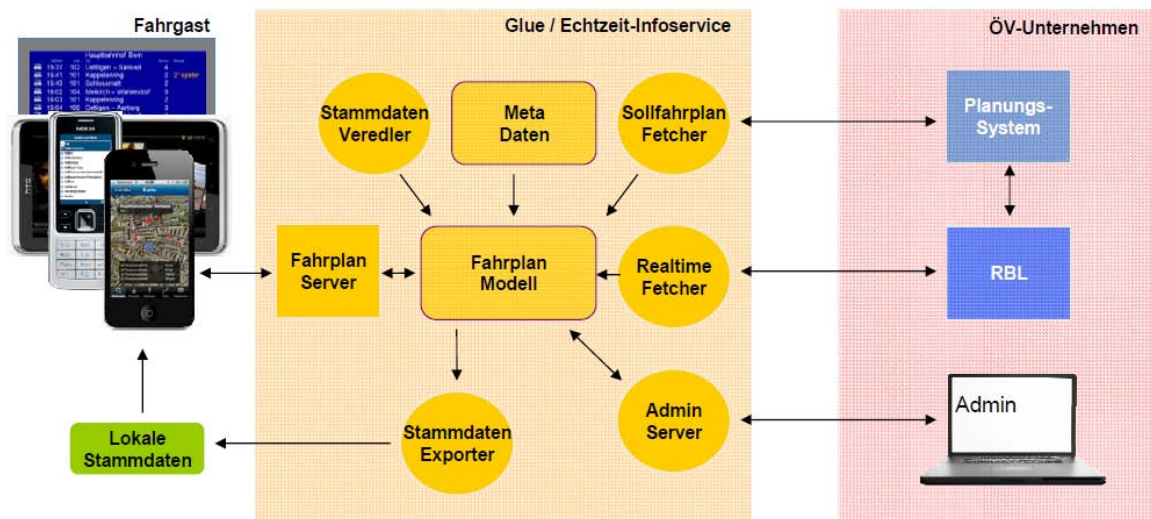
November 2011 – updated version of MEZI (Android). New features: revised layout (eg favorites as mini departure tables on the home screen), augmented reality, Moonliner timetables, corrected data (stops, lines).

May 2012 – RBS railway in MEZI. From 7th May 2012 in the App MEZI can also schedule the RBS railway lines can be queried in real-time. RBS, BERNMOBIL and bus are responding to the needs of passengers and for more recent information - which is now possible thanks to modern technology (MEZI development).

Till May 2012, with MEZI of RBS BERNMOBIL and bus for technical reasons only the bus and tram lines in the region of Bern could be queried. But thanks to an innovative solution that Berner Glue Company has developed together with the RBS, the new train schedules in real-time can be obtained.

ICT/Infrastructures needed

The MEZI operates on two platforms Android and iOS (Apple). Windows 8 Mobile is planned. The Glue Company was responsible for its implementation on both platforms. Iterative Process starting from some general specifications, interface descriptions to get the traffic data and early prototype. Design method: Agile software development.



Supporting Mechanism

Awareness/Information Campaigns

Semi-public launch only with a press release and via word of mouth in order to prove concept and get first performance results. In autumn 2010 advertising campaign: posters inside the vehicles, adverts in newspapers, online publications, newsletters. Since then yearly campaigns when adding new features or extending the transportation network the app was covering.

Partnerships/Key Supporting Stakeholders

1. Glue Software Engineering AG, Bern – software developer and supplier, data integrator,
2. Bernmobil – city transport operator, supplier of the data, beneficiary
3. Moonliner – night transport operator, supplier of the data, beneficiary
4. PostAuto Schweiz – national bus operator, supplier of the data, beneficiary
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Results

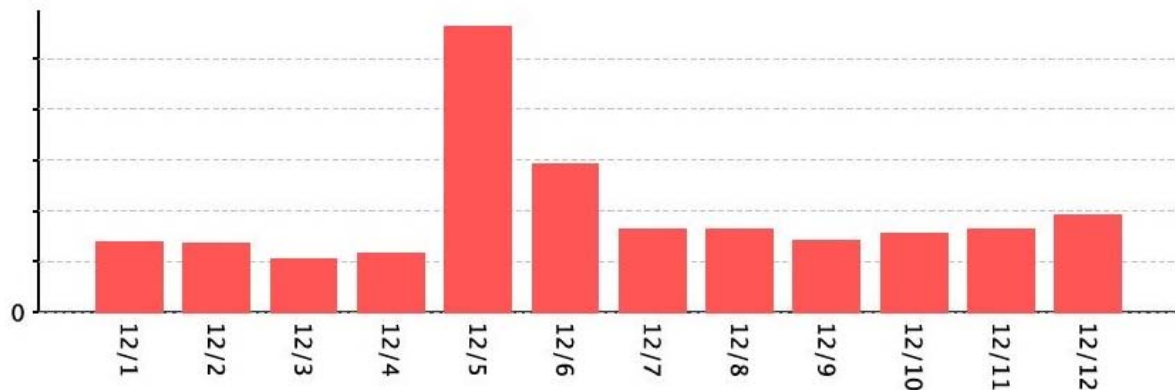
Expected vs Actual Benefits

The objectives achieved by real-time information service:

- customer information with place, time and actual situation along the travel chain;
- automated processing and coverage with stable quality;
- marketing tool - new forms of dialogue;
- increases customer satisfaction (expected, not researched).

Quantitative Results Achieved

In May 2012 over 20 000 passengers were using timetable application - trend continues to grow. By comparison, a year earlier, two year after implementation of the application, there were about 11 000 users. Accordingly, the number of users has almost doubled within a year. 2012 statistics (monthly) - new users of the application:



Source: data of Glue Software Engineering AG
Example of daily passengers activity (July 2011):

Platform	Queries	Unique visitors	Downloads (overall)
iPhone	96 200	13 500	30 380
Android	10 220	1 033	2 950

Source: data of Glue Software Engineering AG

Qualitative Results Achieved

- On-line information available.
- Passengers satisfaction.
- PT companies image improvement.

Key Considerations

Lessons Learned

There were technical issues since the quality of the timetable and real time data was not ready initially for the purpose of dynamic passenger information.

Primary Obstacles

The most difficult step was to persuade the group of transportation companies about the benefit of such an application. Second matter is source data quality and accessibility, what was crucial before implementing the application.

Critical Success Factors

It is most important that there is full availability of reliable real time data. And it's important to provide intermodal information, customers change line and want end to end information coverage for their journey.

Transferability Considerations

The Glue company offers MEZI solution (the platform) on open market. The transferability is only the question of funds, translation to local language, customization of implementation and integration of available PT suppliers data sources.

Up-scaling Considerations

The MEZI covers most part of available means of city public transport. The up-scaling is not necessary, widening of the service eg. by panels on the stops and transfer nodes are possible.

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